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Joint Select Committee on Road Safety
Via email: roadsafety.sen@aph.gov.au

Re: Questions on notice regarding data, targets, speed management and road standards

Thank you for the opportunity to provide additional information to the Committee, via responses to the questions on notice, and additional questions as requested by email. We respond to these below.

1. **Data:** What nationally consistent data relating to vehicle accidents would you like to see collected, and which body should collect the data? Should the data be made public?

- National in-depth crash investigation system. There is currently no consistent in-depth crash investigation of crashes in Australia, apart from investigations performed by the various state police crash investigation units that attend serious or fatal crashes. The last national crash investigation program, ANCIS, ceased nearly than a decade ago. Since then, there have been some small-scale state-based crash investigation projects (e.g. The Enhanced Crash Investigation Study in Victoria), but no ongoing standardized national crash investigations. In contrast, the USA has had a long-running nationally representative crash investigation program since 1979, NASS-CDS. That data has produced a vast amount of research (nearly 500 scientific articles since 2016 alone) to underpin road safety improvements both in the USA and internationally. It is strongly recommended that such a national system be set up to provide comprehensive data to identify the causes and possible solutions for road crash-related injury.
- Nationally consistent data on road transport-related injuries. Currently, data for road transport deaths is provided via the BITRE database, broken down by age, gender and road user type. However, data on non-fatal injuries is currently not provided at a federal level, at least in part because definitions of serious injury vary substantially between states. For establishing efficacy of various preventative strategies and technologies, it is also useful to have access to minor and moderate injury data, so these can be compared to serious and fatal injuries. It would be highly beneficial for injury data to be linked to police data from to the crash, as this enables better understanding of the factors leading to the crash and the injuries sustained. The Federal Office of Road safety could coordinate collection of these nationally consistent datasets in collaboration with the states where the data originates.
- Aggregate statistics should be public. The NSW Centre for Road Safety has developed a very comprehensive publicly accessible interactive data portal for the public-facing statistical data that could be considered for adoption nationally. This is accessible from: https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/index.html
- Researchers, however, often require more detailed case-level data to assess injury mechanisms and how these relate to vehicle, road, and human factors. Such data, which may include details that would allow potential re-identification is best accessed through an approval process, limiting access to genuine researchers under appropriate privacy and

ethical conditions, to ensure that data is not misused and that privacy of people involved in crashes is preserved. This includes case-level linked police report and injury datasets, and also in-depth crash investigation data.

2. **Targets:** The 2018 Inquiry into the National Road Safety Strategy 2011-20 Report recommends the Commonwealth and states commit to an interim target of vision zero for all major capital city CBD areas, and high volume highways by 2030. Does your organisation support the Commonwealth and state governments adopting this target?

Neuroscience Research Australia strongly supports these targets. However, targets alone are insufficient to achieve reductions in transport injuries as our recent experience has demonstrated, and it is imperative that alongside targets, there is a comprehensive plan of action to achieve these targets, using evidence-based proven effective strategies.

3. **Speed Management:** Does your organisation support the installation of point to point speed cameras on all Commonwealth funded roads in the future? Should the Commonwealth Government make the allocation of funding to the states conditional on this commitment being met?

Neuroscience Research Australia strongly supports point to point speed cameras on major highways as one means to reduce speed-related injuries. Allocation of road funding to the states is a broader topic than this one issue, and further detail of how such a condition would apply and the extent of funding that this would apply to would need to be considered to make a judgement on this point.

4. **Road Standards:** To what safety standard should all Commonwealth funded road projects be built? Should funding for projects be conditional on a particular safety standard being met?

Neuroscience Research Australia's researchers are not experts in road design, and defer to other experts on this issue. We do, however, note that there is a need to evaluate the effectiveness of the use of specific road standards, specific road designs and corrective road treatments associated with high crash risk areas (e.g. 'black spots'), to determine whether they are improving road safety outcomes. When deciding if funding for states should be conditional on road standards used, the flow on effects of such conditions on the quality of all roads should be considered, as there is potential to divert funds from state-funded roads to federal funded roads which could have an overall deleterious effect on non-federally funded roads.

5. **Efficacy of road safety programs and the need for evaluations to be outcomes based:** During my evidence, I stated the need for implementation of proven effective strategies to reduce road trauma. I also noted that many road safety programs are not rigorously evaluated to determine whether they are effective in changing road user behaviour or reducing injury, and commonly only undergo 'process evaluations'. Such evaluations only assess the implementation of programs rather than their outcomes. Such an evaluation might evaluate 'awareness' of a campaign, but not whether the campaign changed driver behaviour or reduced injury. Senator Gallacher requested I provide additional examples to demonstrate this point. Note that the examples that follow are not necessarily 'bad' programs, but rather they demonstrate that without outcomes-based evaluation, we cannot be sure that road safety programs are having their intended effects. Some relevant examples include:

a. Child restraint selection methods (This example was discussed during my evidence). Prior to 2010, selection of the most appropriate child restraint for a child to use was done by the child's weight. However, there was little research to show whether this led to appropriate restraint selection (and thus safety). In 2003-2008, my research team undertook a major research program that included crash investigations where children were injured, and also collected data on how parents chose restraints for their children. This demonstrated that many parents were not able to estimate their child's weight, and that a large proportion of children injured in crashes were not using an appropriately sized child restraint. It was proposed that it would be more accurate to provide age-based broad guidelines and to assess whether a child fits in specific restraints by using

shoulder height markers on the restraints to guide parents. Our evaluation of the shoulder height markers demonstrated that this greatly improves the correct selection of appropriate child restraints by parents. These shoulder height markers are now mandatory on child restraints in Australia. This is an example of how rigorous evaluation of *outcomes* can lead to the development and implementation of proven effective programs to reduce road trauma, replacing a previously poorly evaluated and ineffective approach.

b. bstreetsmart is a high profile crash re-enactment event for NSW high school students, where they attend a simulated crash in a stadium, including the attendance of emergency services. They then hear from people seriously injured in crashes and the impacts on their lives. This program (including its predecessor, the Youth and Road Trauma Forum) has been running since 2006, but was not evaluated for its effectiveness on young driver behaviour and safety outcomes until a *pilot* evaluation was done 2019, and the results from this are not yet available. Similar programs in other states have also not demonstrated effectiveness in making young drivers safer, despite the costs associated with running these programs.

c. "I'm counting on you" is a NSW child restraint safety advertising campaign that started in June 2014, and was aimed at getting parents to correctly buckle their children into their child restraint. The effectiveness of the campaign in achieving its primary goal (correct restraint use) has not been evaluated, but rather the evaluation was focussed on assessing whether there was an increase in website traffic to the child safety website listed on the advertisements.

We strongly recommend that all road safety strategies and programs be evaluated in terms of their actual outcomes on road safety (crashes, injuries, measured behaviours) rather than only in terms of process or awareness. Given the large budgets associated with road safety educational campaigns, and modest effect sizes on crash reduction (see Delaney et al, Monash University Accident Research Centre Research Report #220, May 2004), it is essential that such programs be evidence based and their effectiveness in reducing crashes and injury be proven. Existing programs with proven effectiveness should be used as models for designing future programs.

I hope that this information is useful to the Committee, and am happy to provide additional information if desired.

Yours sincerely,

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